

What is claimed is:

1. A portable projector, comprising
a light engine; and
a projector housing having a closed configuration and an open
5 configuration, wherein, in the closed configuration, the projector housing at least
partially encloses the light engine, and in the open configuration, the projector
housing supports the light engine.
2. The portable projector of claim 1, wherein the light engine has a
10 compact state and an expanded state, and wherein, in the closed configuration,
the projector housing encloses the light engine in its compact state, and in the
open configuration, the projector housing supports the light engine in its
expanded state.
3. The portable projector of claim 2, wherein, the light engine is
15 inoperative in its compact state, and operative in its expanded state.
4. The portable projector of claim 3, wherein the light engine includes
optical components, and the optical components are configured so that when the
20 light engine is in its expanded state, the optical components are properly aligned
and oriented for operation of the light engine.
5. The portable projector of claim 1, wherein the light engine includes
reflective optics.
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6. The portable projector of claim 1, wherein the light engine includes
polymer refractive elements.
7. The portable projector of claim 1, wherein the light engine is at least
30 partially enclosed by a light engine housing.

8. The portable projector of claim 7, wherein when the projector housing is in the open configuration, the projector housing forms a support for the light engine housing.

5 9. The portable projector of claim 8, wherein the support is an upright support, and the light engine housing depends from the projector housing.

10 10. The portable projector of claim 9, wherein the light engine housing pivotally depends from the projector housing.

11 11. The portable projector of claim 8, wherein the projector housing includes a horizontal support for the light engine housing.

12 12. The portable projector of claim 1, wherein the projector housing includes a first portion and a second portion, wherein the first and second portion are pivotally connected such that rotating the pivotal connection converts the closed configuration of the projector housing to the open configuration of the projector housing.

20 13. The portable projector of claim 12, wherein conversion of the closed configuration of the projector housing to the open configuration of the projector housing permits the light engine to be converted from a compact state to an expanded state.

25 14. The portable projector of claim 12, wherein at least one of the first and second portions of the projector housing remains coupled to the light engine housing when the projector housing is in the open configuration.

30 15. The portable projector of claim 1, wherein the projector housing includes a clamshell structure.

16. The portable projector of claim 1, wherein heat dissipation from the light engine housing is enhanced when the projector housing is in the open configuration.

5 17. A portable projector, comprising
a light engine having a compact state and an expanded state;
a light engine housing that at least partially encloses the light engine; and
a projector housing having a closed configuration and an open
configuration;

10 wherein conversion of the closed configuration of the projector housing to the open upright configuration of the projector housing deploys the light engine in its expanded state so that the light engine depends from the projector housing.

15 18. The portable projector of claim 17, wherein the projector housing includes a first portion and a second portion, wherein the first and second portion are pivotally connected such that rotating the pivotal connection converts the closed configuration of the projector housing to the open configuration of the projector housing.

20 19. The portable projector of claim 17, where the light engine includes projection optics that are disposed adjacent the top of the light engine housing in the open configuration.

25 20. The portable projector of claim 17, where the light engine includes projection optics that are disposed adjacent the bottom of the light engine housing in the open configuration.

21. A portable projector, comprising
a light engine having an inoperative compact state and an operative
expanded state; and

5 a projector housing having a closed configuration and an open
configuration;

wherein, conversion of the closed configuration of the projector housing to
the open configuration of the projector housing deploys the light engine in its
expanded operative state.

10 22. The portable projector of claim 21, further comprising a light engine
housing that at least partially encloses the light engine.

23. The portable projector of claim 22, wherein the projector housing
has a first portion that is pivotally connected to the light engine housing, such that
15 rotating the pivotal connection converts the closed configuration of the projector
housing to the open configuration of the projector housing and deploys the light
engine in its expanded operative state.

24. The portable projector of claim 21, wherein the light engine includes
20 optical components, and the optical components are configured so that when the
light engine is in its expanded operative state, the optical components are
properly aligned and oriented for operation of the light engine.

25 25. The portable projector of claim 21, wherein the light engine includes
reflective optics.

26. The portable projector of claim 21, wherein the light engine includes
polymer refractive elements.

27. A method of using a portable projector, where the portable projector comprises a light engine; and a projector housing having a closed configuration and an open configuration; wherein in the open configuration the projector housing supports the light engine, the method comprising:

- 5 converting the projector housing from its closed configuration to its open configuration; and
 projecting an image using the light engine.

28. The method of claim 27, wherein the light engine has an enclosed
10 state and an operative state, further comprising deploying the light engine in its operative state.

29. The method of claim 27, where the light engine has a compact state
15 and an expanded state, the method further comprising converting the light engine from the compact state to the expanded state.

30. The method of claim 27, further comprising associating the projector with a source of image data.

20 31. The method of claim 30, further comprising receiving image data from an image data source that is an associated computer.

32. The method of claim 31, where projecting an image includes
25 projecting an image corresponding to the image data using the light engine.

33. The method of claim 27, wherein the projector housing includes a first portion and a second portion that are pivotally connected, and converting the projector housing from its closed configuration to its open configuration includes rotating the pivotal connection.
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34. A method of manufacturing a portable projector, comprising:
providing a light engine;
providing a projector housing having a closed configuration and an open configuration; and

5 disposing the light engine within the projector housing such that when the projector housing is in its open configuration the projector housing supports the light engine in an operative state.

35. The method of claim 34, wherein the light engine has a compact state and an expanded state, and disposing the light engine within the projector housing includes configuring the light engine so that it is at least partially enclosed by the housing in its compact state.

36. The method of claim 34, wherein providing the projector housing includes providing a first housing portion and a second housing portion, where the first and second housing portions are configured to form a clamshell structure that at least partially encloses the light engine in the closed configuration.

37. The method of claim 34, wherein the light engine includes optical components, and disposing the light engine within the projector housing includes configuring the optical components so that when the light engine is in the deployed operative state, the optical components are aligned and oriented properly for projection of images.

38. A projector system, comprising:

a portable projector, including a light engine having a compact state and an expanded state, and a projector housing having a closed configuration and an open configuration, wherein in the closed configuration the projector housing
5 encloses the light engine, and in the open configuration the projector housing supports the light engine.

39. The portable projector of claim 38, wherein the light engine has a compact state and an expanded state, and wherein in the closed configuration
10 the projector housing encloses the light engine in its compact state, and in the open configuration the projector housing supports the light engine in its expanded state.

40. The projector system of claim 38, further comprising an associated
15 source of image data.

41. The projector system of claim 38, further comprising a display surface.

20 42. A portable projector, comprising
projection means; and

housing means having a closed configuration and an open configuration;
wherein in the closed configuration the housing means at least partially encloses
the projection means, and in the open configuration the housing means supports
25 the projection means in an operative state.